

## **ABSTRACT**

An electromagnetic signal processing system (10) comprises a plurality of optical fibre arrays (11, 12, 13, 14, 15 and 16) each having a cluster of optical fibres with their one ends (40) oriented to receive electromagnetic radiation from free-space, or to transmit electromagnetic radiation into free-space. Received electromagnetic radiation passes through respective array outputs (21, 22, 23, 24, 25 and 26) and optical delays (50, 51; 55, 56; 65) to the input (68) of a signal detector (69). Transmitted electromagnetic radiation from sources (71, 72) passes through optical delays (50, 51; 55, 56) to array inputs (21, 22, 23, 24, 25 and 26) so that the one ends (40) of the optical fibres transmit the electromagnetic radiation into free-space.